

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXI.

THURSDAY, OCTOBER 13, 1859.

No. 11.

TUMOR IN THE SPINAL CANAL—DEATH—AUTOPSY.

[Read before the Boston Society for Medical Observation, October 3d, 1859, and communicated for the Boston Medical and Surgical Journal.]

BY EDWARD H. CLARKE, M.D.

THE person whose case is now presented to the Society, was, during the largest part of his illness, the patient of Dr. Moses Rogers, of Falmouth, Mass. For a short period he was under my care in Boston; and also for a short time he was a private patient in the Mass. Gen. Hospital, where he received the advice of the physicians of that institution. The following report of his case is compiled from an account of it, kindly furnished to me by Dr. Rogers; from the Records of the Mass. Gen. Hospital; and from my own notes.

Mr. ———, an American, æt. 43, was born in Dedham, Mass. During his last illness, and for some time previous to it, he resided in Falmouth, Mass. He was married. His profession was that of a clergyman. He was about 5 feet 5½ inches in height; stout, with a large head and an active brain. He had always enjoyed robust health, and had been capable of a great deal of physical and mental exertion. He had never suffered from dyspepsia or other ailments to which professional men are often liable, except occasional sick headaches, and these always induced by excitement.

Sixteen years ago, while assisting in lifting a heavy weight, he felt a "stitch" or pain in the back of his neck, which troubled him for a few days. Ever afterward he felt a weakness or uneasiness in the spot where the pain was perceived, whenever he took a long walk, but at no other time. During the summer of 1858, he bathed frequently in the sea, and continued his baths late into the autumn. It was his custom to remain in the water for fifteen or twenty minutes. No sensation of chilliness or discomfort was induced thereby. In January, 1859, while riding in face of an easterly storm, he felt pain in the back of his neck, extending to the right ear. Soon after, he also felt pain between his shoulders, and was so uncomfortable that he sought medical advice. An examination of the seat of pain revealed no tenderness. A blister was applied. Chloroform and other counter-irritants were

VOL. LXI.—No. 11

used externally, and considerable temporary relief was obtained. But the relief was only temporary. The pain returned with increasing severity.

By the 1st of May, 1859, his distress became intense. He could not lie down or sit up, comfortably, in any position. On some occasions he stood erect all night, rather than sit or lie at all. At this time he began to feel numbness in his right arm and hand. He also complained of weakness in raising his arms, and especially in raising his right arm. There was some swelling of his right hand, with inability to detect articles grasped by it. In his left hand there was slight diminution of power. Two or three weeks later, a similar numbness was observed in his left leg, and soon afterward in his right leg, with slight weakness of his knees, and hesitation in walking. At about the same time, he began to feel numbness around his abdomen, and experienced some difficulty in voiding his urine and feces. This sensation of numbness gradually spread over his chest as well as abdomen, and gave him a feeling which he described as one of being cased in armor, or bound with iron. His drinking-water and wine were analyzed, but no lead could be detected in them. His bowels and appetite were normal. The distress induced by the sitting and the horizontal posture grew gradually less. By the middle of May he was able to lie down all night, and for some time he slept tolerably well. He came to Boston early in May, where he remained for two weeks. Thence he went to Northbridge, and after a visit of three or four weeks he returned to Boston, and entered the Mass. General Hospital.

At this time, which was the last week in June, an examination disclosed slight pain on pressure at the back of his neck, and also on twisting it a little. He could not hold his head back, and preferred to keep it over the centre of gravity. The pain, which he referred to the top of his spine, was most severe at night, or when first moving in the morning. His sight was not affected, but somewhat later there were muscæ volitantes, especially in the left eye. He thrust his tongue out a little to the right, but was able to protrude it from either side. Riding produced pain near the top of his spine. On long walking he put his foot down carefully, and moved with a shuffling gait. The pulse averaged in the neighborhood of 65 and 70 per minute, and was apparently normal. The numbness and loss of power, described above, continued, and were more marked. Sometimes, when any part of his body was touched, he complained of a reflex action in his extremities. There was no distinct tenderness anywhere along the course of his spine, below his neck; and on his neck, the tenderness was by no means decided. Occasionally, it was not felt at all, even on hard pressure. There was no apparent sensitiveness to the passage of ice along his spine from occiput to coccyx.

He left the Mass. General Hospital, and returned to his resi-

dence in Falmouth about the middle of July. At that time, or very soon after, he could raise his left hand to his head, but had no control over his right arm and hand, except to move his fingers. He could use his left foot quite well, but had so little use of the right that he could not walk without assistance. There was also impaired power of the muscles of the throat, and some vertigo. By the first of September, the disease had made slow but evident progress. At that time, nearly all voluntary motion was abolished. During the first and second days of September, the disease suddenly and decidedly advanced, and involved the involuntary as well as the voluntary muscles. He retained power only to move his head a little from side to side; to whisper; to swallow liquids, and to breathe with difficulty. His intellect remained clear. It had been so throughout the course of the disease, and it continued so to the last. He suffered greatly from pain, and at times he had paroxysms of intense agony. The severity of the pain seemed to increase with the progress of the disease. During the last week or two, he could scarcely find words in which to describe his sufferings. He said that he felt like one bound into an iron coffin, with live coals packed about him; and that his neck felt as if it were noosed in a cord, which some one was constantly trying to tighten. The pain was evidently not confined to his neck and its neighborhood, but was felt more or less universally. He died on the 10th of September.

Various remedial measures were resorted to, in the treatment of this case. None of them seemed to stay the progress of the disease, or to influence it much. Some of them ameliorated his sufferings. Counter-irritation and dry cupping were early employed. Later, electricity, colchicum, strychnia, iodide of potassium and iron were exhibited, one after another, though not in the order I have mentioned them. Still later, repeated blistering was tried upon his neck, and a seton passed through it. Opium, in various forms, was given, and in the last stages of the disease it was exhibited freely. Chloroform and ether were largely administered by inhalation, and with marked temporary relief of pain.

A *post-mortem* examination was made by Drs. John Mackie and Moses Rogers, of Falmouth. From their report it appears that a "tumor was found within the spinal column, at the right front of the cord, and at the third vertebra. The cord immediately pressed by the tumor was little more than membranous; and at the opposite side of the tumor there was destruction of a portion of the vertebra." The tumor, thus described, was sent to me, preserved in alcohol. Dr. Ellis, to whom it was submitted for examination, describes it as follows: "Having been preserved in alcohol, it could not be examined as satisfactorily as under ordinary circumstances. To the naked eye its structure appeared rather loose; and examined with the microscope, cells were seen, but so much changed by

the action of the alcohol, that no opinion could be formed of their actual character."

From this statement it is evidently impossible to say whether the tumor was malignant or not. The question has been asked, whether the strain which was felt in the neck sixteen years before the fatal attack, might not have been the cause of the tumor. There is nothing in the case which warrants such an inference, though it is possible that the tumor may have so originated.

GANGRENE OF THE LUNGS.

[Read before the Boston Society for Medical Observation, October 3d, 1859, and communicated for the Boston Medical and Surgical Journal.]

BY CHARLES D. HOMANS, M.D.

J. D., Irishman, aged 35 years. The previous history of the case is shortly as follows:—There was no hereditary predisposition to disease. He had generally been a healthy man, though at times in the habit of drinking too much. His trade was that of a shoemaker, of course somewhat sedentary. During the spring of 1858, he was attacked for the first time with cough, in the beginning slight, but gradually increasing in severity. He soon began to lose health and strength, and became much emaciated. There was never any hæmoptysis. For two or three weeks before he was first seen by me, he had been confined to his room, and most of the time to his bed.

Sept. 21st, 1858.—Is a rather tall man, of a dark complexion, and much emaciated. Is lying in bed on his back. Countenance anxious; tongue with a dark grey coat; pulse 88; skin hot and moist; no headache. At times, has chills, followed by heat and sweating, the latter frequently quite profuse. Coughs much, expectorating a dark-colored, slightly offensive mucus. Bowels generally regular. Appetite pretty good. Respiration somewhat labored and hurried.

Percussion reveals nothing marked. On auscultation, mucous râles are heard generally over both sides of chest, perhaps most marked below right scapula. One drachm of a solution of diluted sulphuric acid, two drachms to four ounces, was directed to be given every three hours. One drachm of solution of morphine (the sulphate) to be taken at night, *p. r. n.* For drink, flaxseed tea, acidulated. Diet to be vegetable. Expectoration to be saved.

22d.—Passed a restless night, suffering from dyspnœa, which is increased, and necessitates a half sitting posture. Has expectorated perhaps half a pint of a dark-colored fluid, more offensive than that of yesterday. Pulse 90. Otherwise as before. Sinapism to chest, *p. r. n.*

23d.—Sitting up in bed on account of dyspnœa. Coughed much in night, and raised about a pint of a dark-colored liquid, containing minute, blackish grey masses, resembling bits of lung tissue. The liquid is very offensive. Pulse as before. Appetite good. Cod-liver oil, one drachm to be given three times daily, and gradually increased in quantity.

24th.—Expectorated during the night a great quantity of the same fluid as yesterday, there certainly being more than a pint in the vessel shown to me. He seemed to have lost flesh during the last twenty-four hours. No nausea. Appetite good. May have beef-tea.

25th.—The fluid raised on the 23d instant was examined by Dr. Ellis and myself. Under the microscope, the minute dark masses were found to consist principally of cellular tissue, considered by us to be portions of the lung. Has again expectorated profusely, during the night, a dark offensive fluid running from his mouth with but slight exertion on his part. The matter raised was exceedingly offensive, as was also his breath and the whole room.

26th.—He appears somewhat more comfortable this morning. Pulse 80. Sweating somewhat less, though still profuse, his wife being obliged to change his shirt at least once every day. He seems very weak. Appetite good. Bowels regular. Wishes for, and may have beef-steak. Wine and water, *p. r. n.*

27th.—Was quite comfortable yesterday, but during last night he had a paroxysm of coughing, and raised over a pint and a half of a fluid similar to that described above, and always containing many small, dark-grey masses, exceedingly offensive. Relishes his meat, and has no trouble from it. Pulse 90. No pain in chest. Considerable dyspnœa. On auscultation, the results were as before, save that there is an approach to gurgling in the right back, though it is not well marked. Percussion seems slightly duller in this region than on the other side.

28th.—The quantity expectorated amounts to about one pint and a half each night. Pulse 90, rather weaker. Countenance very anxious. Sweating profuse.

Oct. 2d.—He seems very weak, gradually failing, though he eats a great quantity of food, and enjoys it all; eggs, meat, in fact everything that he can get. Expectoration as before. Bowels regular. Whisky *ad libitum*.

5th.—Is extremely emaciated. Pulse 90, feeble. Countenance sunken. Is bathed continually in a cold sweat. Dyspnœa great. Bears all his stimulants well. Expectoration, as copious as before, and is always greatest at night, when for two or three hours he will be spitting all the time. Cough not very troublesome. In the daytime he seems feeble and prostrate, like a man tired out by some violent exercise. Says but little or nothing. Appetite is very good. One grain of sulphate of quinine, in solution, to be taken three times daily.

8th.—Seems in much the same state as at last report, though exceedingly weak, and apparently moribund. Pulse 90. Still sweats profusely, and expectorates nightly between one and two pints of an exceedingly offensive fluid. Auscultation and percussion as before. Appetite good. Bowels regular; once or twice only, during his sickness, has he needed an injection.

11th.—Expectoration less in quantity and lighter colored. Pulse 86, not quite so feeble. Sweating less. Eats and drinks enormously. Is very weak, but in much better spirits.

15th.—Is gaining, though still expectorating about a pint of fluid in twenty-four hours. This is not so dark colored, nor so offensive. Appetite good. Mucous râles are generally disappearing, though still very abundant in lower right back.

20th.—Has much improved since last report. Pulse 76, stronger. Appetite good. Bowels regular. Is able to sit up an hour at a time. Is very much emaciated. Expectoration, more purulent in character, is still slightly offensive. No pain. On auscultation, mucous râles are still heard below right scapula; elsewhere the respiration seems normal. The morphine has been omitted.

25th.—Sitting up. Expresses himself as quite well. Expectoration much less in quantity, and purulent. No pain. Still some mucous râles in right back. Slight cough at times. Sleeps well. He was directed to continue the use of the cod-liver oil and the stimulants for a while longer, but to abstain from all medicines.

In December, he came to my office, and reported himself, and appeared to be quite well. A caution was given him as to the too great indulgence in stimulants.

Sept. 25th, 1859.—I went to his house, and found him quite stout and hearty. He said he was as well as he had ever been in his life, save that since his illness he was more liable to cough than before.

ERYSIPELAS, WITH A CASE.

[Communicated for the Boston Medical and Surgical Journal.]

DR. DEWEES abjures the idea that erysipelas ever produces healthy pus, and consequently would reject "phlegmonous erysipelas" as an absurdity. Now cases sometimes happen in the country and in corners, which do not occur in cities and hospitals. Some years past, Judge W., aged 45, had erysipelas in the right hand, which was followed by suppuration; and healthy pus appeared first by the breaking of a diffused abscess. Twice we had to use the lancet between the fingers, and both times healthy pus issued. There is, therefore, as we ourselves have experienced, room for all the divisions of different authors, viz., Mr. Lawrence, Dr. Good, and Caze-
nave. According to them, there is phlegmonous, œdematous, erratic, as well as simple or common erysipelas, which last is some-

times denominated vesicular. Dessault tells us of *bilious* erysipelas.

The erysipelas of the face is that variety which is ushered in with chills, succeeded sometimes by acute fever, and often accompanied with delirium. This is the *erysipelas* of Cazenave, and of Mr. Arnott, who proposes to confine the term to this variety. It is also the *local* of Dr. Good and the *simple* of Mr. Lawrence. Erratic, œdematous and phlegmonic species may exist, and we believe commonly do exist, without vesicles, or little blisters, and we can by no means agree with Dr. Dewees, that there is but one species of erysipelas. Local erysipelas does not travel in successive patches, but is limited to a particular part, the cuticle being raised into numerous aggregate, distinct cells; or the cells running into one or more blebs, or larger blisters.

Erratic erysipelas travels in successive patches from part to part, the earlier patches declining as new ones make their appearance; these are the views of Dr. Good. Cazenave, on the same, says, that instead of passing through its various stages where it was first developed, it may successively attack different parts of the body, and disappear from that which was first affected. At other times it extends over a greater surface, gradually, without disappearing from its point of original attack, so as, in some rare instances, to cover the whole body at the same moment. In certain cases it suddenly disappears, and attacks another spot, leaving no other traces than a slight desquamation. Contrary to such high authorities, Dr. Dewees says, "We are of opinion that the only division that erysipelas is justly susceptible of, is into the superficial and deep-seated."

My own opinion is, that erysipelatous and phlegmonous inflammation is of two distinct kinds; that they do not primarily differ in degree, only, as Mr. Lawrence assumes, but in nature. Still we do believe that one of the causes of phlegmonous inflammation may have an erysipelatous origin; that the feeble pulse, the irritable nerves, low state of mind, and poorness of blood with which the disease begins, may be so changed by remedial means, or abnormal alterations, that a phlegmonic diathesis may more or less perfectly ensue. On the other hand, the cutis, and parts surrounding phlegmonous inflammation, may, by a deterioration of vital energy, take on what has perhaps not very properly been termed the *typhoid* inflammation of erysipelas. Indeed, what is more common than for phlegmonous tumors, or the stump of a limb after amputation, when about to mortify, to put on the appearance of erysipelas, take on its peculiar inflammation, and, like it, throw out yellowish vesicles?

That erysipelas affects those who have œdematous limbs, anasarous swellings, or hernial tumors, shows it to be a disease of debility. And its appearing with its peculiarities, such as serous blisters, a diffused flush, moderate heat, and dark spots upon parts

about to sphacelate, and sometimes upon the whole surface, when scarlet fever is about to end fatally, proves its tendency toward mortification of the blood.

Still, in the same disease the diathesis may be at antipodes at different periods; if not so, why should Dr. Dewees bleed at one stage of intermittents, and give bark, wine and quinine at another stage? It so happens that the whole system may not in every case respond to partial disease and local action; and, on the other hand, that a local disease may require local remedies, of a class entirely different from what the general system indicates. Now, although erysipelas may have debility for its remote cause, the system may be in such a state from the exciting, occasional, or proximate cause, as not to admit of stimulants, nor may it be in such a state of phlogosis as to admit of bloodletting; for does it not follow, of course, that if one of these modes is ineligible or improper, the other must be the most eligible, at least to its full extent. A local stimulant may be decidedly indicated, while the general system indicates no other than one decidedly antiphlogistic.

Dr. Underwood, Mr. Burns and Dr. Garthshore would use camphorated medicaments as one of the very best applications locally. Dr. Underwood declares bark the best constitutional remedy. As to bloodletting, no better directions can be found than those of Huxham: to draw blood when the fulness, force and hardness of the pulse justifies its loss; but, on the contrary, when the arterial force is feeble, and the patient languid, it never should be adopted. The state of the pulse, therefore, must ever regulate the employment of bloodletting. Dr. Dewees found saturnine applications decidedly hurtful, and mercurial ointment useful. Blisters are approved of by him, and by Dr. Physick, if the part is so situated as that the blister can cover it, and the edge of it go on the sound part, but not otherwise.

Puncturing and scarifying are approved of by Mr. Lawrence, Dr. Dobson and Mr. Hutchinson. Puncturing the eyelids, when they were so much swollen as to close the eyes, has soon restored the sight without any bad results. As to the mode of scarifying, or incising, we give this: "the incisions may be made about an inch and a half in length, from two to four inches apart, and varied in number from four to eighteen, according to the extent of surface the disease is found to occupy." Mr. Lawrence thinks it necessary to incise so deep as to produce free bleeding. But let it be particularly noticed that the practice of making free incisions is best in the early stage of the disease, and not afterward. One of the high authorities says, that the old notion that unctuous and oily substances are injurious, is unfounded. Higginbotham's remedy was that of rolling a stick of nitrate of silver over the affected part. Mr. Vetch's was that of rubbing with a decoction of tobacco.

Shingles are so much of the nature, character and import of

what is called erysipelas, or St. Anthony's fire, as not to have a separate mention by a high authority before me; which I think very injudicious, as well as indiscriminative, as I have had a case of shingles which required and which was cured by repeated letting of blood; whereas, in genuine erysipelas, I have never bled nor found the pulse once to indicate the loss of blood at all.

As to bark, Sir Gilbert Blane, in his Medical Logic, decides that it is "the best remedy in erysipelas." Dr. Fordyce gave it in drachm doses every hour, as he informs us, with the most decided advantage. In erysipelas of the scalp, Wilson, of the London Lancet, would incise down to the bone. Rubbing in strong mercurial ointment is relied on to relieve the burning pain, heat and itching. A solution of three grains of corrosive sublimate in eight ounces of water, is still better for the same purpose. To keep it from wandering or spreading, a solution or ointment of nitrate of silver acts as a *cordon sanitaire*: the solution has eight grains to an ounce of water. Dr. Hayward, of Boston, in his report of cases occurring in the Massachusetts General Hospital, speaks of giving half a drachm of quinine once in twenty-four hours, and says patients are often benefited by a larger quantity. He used leeches, and puncturing with the lancet, but disapproved of incisions. Velpeau's remedy was sulphate of iron, one ounce to a pint of water, used as a lotion; or an ointment of sulphate of iron, one drachm to one ounce of lard. He says, a speedy improvement follows the use of either of these external applications. A long-continued diaphoresis, by remedies not heating, such as sage tea, and vinegar-whey, was in high and deserved estimation, by two respectable physicians, Dr. Allen, of Vermont, and Dr. Perry, of Rhode Island.

Besides the several forms of erysipelas above designated, there is a chronic form not mentioned; it is that seen in the sore legs of old men, surrounding open ulcers, and sometimes in other persons who have old sores. Here the treatment must be upon the general principles adapted to other cases. A late case, which had withstood for a long time the usual treatment for sore legs, was speedily cured when thus managed; the cranberry poultice seemed especially useful.

A CASE.—In May, I was called to visit a female infant, three months old, of Irish parents, which presented phenomena so singular, that I thought them worth offering for publication. The whole body, from legs to neck, was completely covered with erysipelas; it had not yet reached the face, as it did afterward. Every part thus affected was mightily increased in bulk; especially was this noticeable in the labia pudendi, one of which had, besides the enlargement, an ulcer about an inch and a quarter long, into which half the hollow part of a goosequill might be laid lengthwise; there was no discharge from it, but the bottom of the cre-

vice, or fissure, had a purulent appearance. The thought of syphilis in the parents occurred at once, but it was groundless.

It was the 15th of May that I first saw the patient. On the 1st of June, the erysipelas, after having invaded every part of the body, had subsided. The labium, so singularly affected, was entirely well; but I was now called for a swelling of the shoulder, involving the front of the arm-pit, which ended in an abscess, which was suffered to break, and discharged healthy yellow pus. Having another patient in the neighborhood, I dropped in about a week after, and found my little patient recovered. Creta preparata was the application to the ulcer. A lotion, composed as follows, was prescribed and applied to the body and limbs of this universally erysipelatous patient. Twenty grains of sulphate of iron were dissolved in four ounces and a half of water, to which one ounce of laudanum was added, the anodyne being urgently needed, on account of the smarting the urine occasioned to the ulcer. Sweet spirits of nitre were given for the fever, and other remedies *pro re nata*.

JOSEPH COMSTOCK.

Lebanon, Conn.

CASE OF SUSPECTED MALIGNANT PUSTULE.

[Communicated for the Boston Medical and Surgical Journal.]

MESSRS. EDITORS,—If the following description of a case under my care, of late, will afford, in your opinion, any interest to your readers, I shall be happy, at the suggestion of several medical friends who concur in the diagnosis as one of probable malignant pustule, to place the same at your disposal.

Miss A. B., of this town, seamstress, æt. 37, of robust constitution, and whose antecedents, prior to her last illness, had been only those of uninterrupted good health, and who belonged to a family long lived, and all remarkably free from any tendency to erysipelatous or cutaneous affections, summoned me on Wednesday, Sept. 21st, for what she supposed a common boil.

The account which I received from the patient was as follows. On the previous Saturday, having, for a few days before, suffered from sore throat, headache, and local pains, she perceived a small "pimple" upon the end of her nose. On Sunday, felt some tingling with burning pain; "pricked" the vesicle, and applied a domestic irritant. On Monday morning, awoke, to discover an increase of redness and swelling, which continued through this and the following day; and on Wednesday, hearing of several cases of local erysipelas in the neighborhood, felt the need of medical advice.

Wednesday, M.—Patient sitting up. Has taken two draughts of infusion of senna, which have been followed by free dejections. At tip of nose, and mostly upon the left ala, is felt a hard tuber-

cle, of the size of a split pea, of a dull red color, and covered by a dirty brownish scab, through which an ichorous fluid is slightly oozing. Integument of nose much swollen, tense and shining; left eyelids prominent, œdematous, and closed. Tongue free from coat; appetite unimpaired; complains only of a sensation of tightness of nasal integument. Pulse 90, weak. R. Quinia sulph., gr. i. every four hours. Apply to nose, sol. plumbi acetat.

7, P.M.—Reports better, in respect of local heat and tension; but is evidently suffering from severe pain in left chest, which she describes as radiating to left shoulder. Pulse 86. Apply to seat of pain, in thorax, hot stupes of spts. vini rect. dil. R. Pulv. ipecac et opii, gr. x. Continue quinine.

Thursday, 8, A.M.—Has slept tolerably through night. Pain in chest relieved by fomentations. Integument of nose sub-livid; œdema of left eyelids diminished, being now easily separated. Pulse 86. Some disposition noticed to an extension of the inflammation, by swelling of left cheek, terminating in a well-defined, red border, from the angle, along the ramus of the jaw, to chin. Circumscribe redness with sol. nit. argent. Paint inflamed surface with tinct. iodini. Continue quinine.

Evening.—Suddenly called to patient, accompanied by my friend H. W. Rivers, M.D., of Providence, who was accidentally in town. Inflammation has extended to both cheeks. Eyelids, of both eyes, œdematous and closed. Integument of nose purplish, darkening in color to the tip, where are seen several phlyctænæ, filled with a turbid serum. Tongue slightly coated. Pulse 130, weak. Replace wash with R. Ferri sulphat., p. i.; aquæ, p. ix. M. Continue quinine. Wine whey *ad libitum*.

Friday, 8, A.M.—Dr. Rivers in consultation. Has passed a comfortable night. Pulse 86. Nose still purplish, but general swelling much diminished; right eye now open, and the lids of the left are easily separated. Everywhere, the color of integument, which yesterday was scarlet, is now yellowish—partly as from wash, but as we often notice in retrograding erysipelas. Continue treatment.

This patient was seen several times through the day; but upon each successive visit, from the sinking pulse, cold extremities and significant tremor, the tendency to a rapidly fatal termination was more and more apparent. Animal broths, carb. ammoniæ, wine and brandy, were successively employed; the swelling and lividity became general, extending down to both clavicles; the respiration rapid and labored. A state of semi-delirium supervened, and after an hour only of coma, the patient expired at 10, P.M., as by apnoea, from a sudden closure of the glottis.

Query.—Wherein does the above case differ from those of malignant erysipelas, so graphically described by well-known authors, starting from an initial irritated point, and proving suddenly fatal? If it should be styled true malignant pustule, it is rather a striking coincidence that a disease, about which we hear so little,

should have so frequently been met with in the precincts of Rhode Island during the present season.

J. JAMES ELLIS, M.D.

Bristol, R. I., October 3, 1859.

EMPHYSEMA AND DEATH AFTER A BAYONET WOUND.

[Communicated for the Boston Medical and Surgical Journal.]

THE case of Charles W. Banks, who was injured by a bayonet on the 30th of August, at the "Seymour reception" in Hartford, presents an aspect in a medical point of view of very great interest. As the whole affair was of more than usual public importance, and we have so much testimony, published and unpublished, upon the subject, it will not be deemed improper that we should sum up the evidence, adding whatever reliable information we have been able to obtain, for the purpose of developing the truth, and give the result thereof.

The wound was inflicted on the right side, about six inches from the spine, its external orifice being over the 9th rib, the puncture extending from this point obliquely over the 8th, and penetrating between the 8th and 7th, having a length of an inch and a half or two thirds. The external wound on the dead body was five eighths of an inch in length; the internal, not easily discoverable, was at any rate extremely small. Half an hour after the infliction of the injury, the wound, as seen at Hartford by Dr. Ellsworth, appeared about three eighths of an inch in length and breadth, the hole being star-shaped, with a triangular and clear incision. Its depth, owing to its peculiar character, could not be accurately determined. The loss of blood was extremely small. There was no emphysema, nor did auscultation or percussion, carefully performed, detect any internal lesion; and there was neither cough, bloody expectoration, nor difficult breathing. Banks left, for his residence in Bridgeport, in the afternoon train of cars. At Meriden he found himself in so much pain, and symptoms, to him unusual, appearing, he became alarmed, stopped at that station, and sent again for a physician.

On the examination then made, a probe was supposed to have been passed a considerable distance into the chest, and of course a hole was believed to exist through the parietes; there was some bleeding, and emphysema to the extent of four or five inches diameter around the orifice, covering a space about the size of the hand, perhaps a trifle more. Mr. Banks was visited by Dr. Jewett, of New Haven, Professor of Obstetrics, who acted throughout the case as counsel.

At the request of gentlemen interested for Banks, Dr. Ellsworth, of Hartford, visited the patient on Thursday, just forty-eight hours after the injury was received. This was the last time the invalid was seen by Dr. Ellsworth, so far as the testimony goes to

show. Dr. Ellsworth insisted, throughout, that the lung was uninjured, while the Meriden gentlemen, Drs. Catlin and Churchill, with their counsel Dr. Jewett, who managed the case, insisted that it was, causing, as we propose to show, a most fatal error.

The first examination by auscultation at Meriden, so far as it appears, was on Wednesday, when Dr. Catlin says he found symptoms of disease of the lung. Dr. Ellsworth auscultated on Thursday noon, the day after, and found a perfectly clear and healthy respiratory murmur over the whole right (injured) side, and nothing to indicate more disease of the right than the left lung; percussion was equally resonant over each, except that on the lower part of the left it was a little more tympanitic, owing to flatus in the stomach which Mr. B. was freely belching; there had been no cough or bloody sputa; the pulse was 120, without any peculiar indices of prostration; breathing was rather hurried, but the patient was easier, owing to copious alvine evacuations and emesis. The slight emphysema had disappeared, without incisions. It was stated by the medical attendants that Banks had, from his arrival in Meriden, been greatly troubled in his bowels, had taken a dose of physic before leaving home, which had not operated, and had, in addition, overloaded his stomach with indigestible food just prior to the accident. Banks complained more of his bowels for some three days than he did of the wound, and was only relieved by the operation of physic. On Friday he was bled, and again on Saturday. On Sunday, the sixth day, he died, as we shall show, by suffocation.

Whether the bayonet actually punctured the thorax, making a perforation, is not proved, though it is supposed so to have done by the examiners at the autopsy. At this, fortunately, Dr. Knight was present. His careful dissection and well-known uprightness give us a reliable clue to the truth. Nevertheless, even Prof. Knight might and probably would be biased in favor of the opinions of those with whom he was more or less associated; yet his testimony developed facts showing there had been a great error somewhere. There was found, in the right cavity of the chest, considerable air, at least three pints of "a dark-colored, offensive fluid"; the lung was pressed back against the spine, and not much larger than the hand, all its air squeezed out, but *free from wound and "very nearly healthy,"* in fact perfectly so. Much serum was in the pericardium, and in short all the phenomena presented themselves that are always found in asphyxia from empyema, and the lung with the appearance and pathological condition present in such cases if healthy. If this was so, where are the proofs of inflammation of the lungs detected by Dr. Catlin on Wednesday? Inflamed lung cannot be compressed as this was.

We propose to show that Banks, if he did not actually lose his life by a neglect of the ordinary rules of surgery, certainly lost his only chance, according to our belief, and all authority, by that

omission. If, however, the unfortunate man unnecessarily perished, his death will be productive of much good, if surgeons will take the lesson to heart and learn what it teaches.

When the patient was visited by Dr. Ellsworth on Thursday noon, three days before his decease, the opinion given by Dr. E. from that examination, and repeated to the officers of the guard at that time, was, that the lung was sound, that it was then freely permeable to air, that unless inflammation was checked, effusion would rapidly take place, say within three or four days, from *pleurisy*, and that unless this was *evacuated*, death from *that* cause must inevitably ensue, while if done, recovery was probable. But if paracentesis was not practised, or the re-opening of the wound, the chest would be found, after death, full of fluid, the lung collapsed and pressed against the spine, free from wound, and probably also from inflammation—in fact, just as happened. To impress the importance of watching the effusion, upon the minds of the gentlemen, Dr. E. read to them an extract from Guthrie's "Military Surgery," so that it might be impossible not to know the correct method of procedure. We quote the passage, for the benefit of those of the profession who may not possess the volume. Guthrie was Staff Surgeon in the Peninsular War, and his authority in these matters is unsurpassed. In speaking of punctured wounds of the chest and those made by small balls, which in an important particular are of a similar nature, he says, on page 451:—

"In cases in which the external opening or wound does not communicate freely with the cavity of the chest, the principal danger arises from the inflammation of the pleura ending in effusion, which, if not evacuated, leads to the loss of the individual. *It is the great fact to be attended to in the treatment of pistol wounds of the chest, or those made by small balls which do not pass out.* All the persons I have seen die from small balls have died with the cavity more or less full of fluid. The *post-mortem* reports of all persons killed in England in duels by wounds through the chest, unwittingly attest this fact, as well as the insufficiency of the surgical treatment they received, and the necessity, for the future, of its amendment. It is in these cases that the stethoscope is most valuable—its frequent use indispensable. When the respiratory murmur ceases to be heard, except at what is the upper part of the chest, whatever the position of the patient may be, it is full time to enlarge the original opening, or to draw off the fluid by the trocar and canula."

Could anything have been more appropriate to the subject? Could any foresight have proved more prophetic?

Now what are the facts as regards the case under consideration? From the testimony published, there does not appear a word indicating that the existence of a fluid was detected before death, and we do not believe any attempt will be made to show that it was. Blinded by the idea of a huge bayonet hole in the lung, attention was addressed to this alone. There is most satisfactory proof that the case was considered and treated by the Meriden gentlemen and the New Haven counsel as hepatized lung; the published testimony is alone sufficient to prove this. The removal of the

fluid by paracentesis was unquestionably prevented by the idea that the lung filled the chest, and that the dulness on percussion was proof of solidification and not of fluid. But even had pneumonia existed with large effusion, under these circumstances, the treatment should have been the same as in pleurisy alone, so far as regards that effusion. In the vicinity of Hartford there is but one opinion among medical men who have studied the evidence as to this oversight, and that is as I now state.

In reply to the question, "Might not the liquid have been drawn off?" Dr. Knight said that it could, but thought the patient would have probably died any way. It must be remembered that Dr. Knight did not see the patient while living, at least so far as there is testimony, and the corpse only some time after death; and looking into a decomposing dead body is not always the best way of settling that question. If Banks was able to bear a bleeding on Friday, and again on Saturday, the day before his death, he certainly could have borne paracentesis better, and with greater certainty of benefit. The very fact of extreme danger, and of complications, rendered puncture by the trocar peculiarly necessary. There was near half a gallon of very offensive liquid and much foetid gas in the chest, completely annihilating the right lung for purposes of respiration; the effusion into the pericardium greatly diminished the capacity of the left, and this, originally the smallest of the two, was further diminished by pressure in that direction on the mediastinum, so that it could not have had much more than half its usual capacity. Banks therefore breathed with half of one lung. Can any one say that this load ought not to have been removed for fear the patient might possibly die of something else? and this, too, when the wound was peculiarly well situated for reopening? All surgery utters but one voice, and that an imperative one; remove the pressure, whether gas or fluid.

But the question of paracentesis was not debated, for the evidence is clear that there was no recognition of the existence of fluid at the very moment when death was resulting therefrom. Does not its omission, under the circumstances, itself speak volumes? Authority is so strong in its favor, and it was here so peculiarly necessary, that its neglect absolutely implies oversight, or fear of the operation; and we cannot bring ourselves to believe that it was the latter. Further evidence of the fact exists, which it is not necessary now to present. This neglect occurred in spite of the most urgent advice to guard against the fatal effusion.

Drs. Catlin and Churchill founded the opinion that the lung was wounded, on the existence of emphysema, not appearing to be aware that it could possibly occur without injury of the lung; as the former gentleman said, "I know of no other way that it can be satisfactorily accounted for." Dr. Knight, also, thought there must have been a wound of the lung because of the emphysema, though he admitted it could not be found, "and if existing at all, must be very small." Now a knowledge of anatomy and pneumatics will

show any one the incorrectness of this opinion; but authors most expressly declare not only the *possibility* of emphysema without perforation of lung, but have written long articles upon that very form. I would refer to Chelius, Samuel Cooper, and the Encyclopædia of Medicine, the two latter speaking quite at length. Chelius clearly distinguishes that which occurs without a wound of the lung by the fact that *it is not diffuse*, but confined to the neighborhood of the wound, while in case of pulmonary rupture the air spreads to a great extent. Now the witnesses state that in Banks's case the emphysema spread over a space about the size of the hand, while the wound was of all injuries one most likely to have been followed by frightful emphysema had there been any escape from the lungs, as the very valvular wound presented the best possible condition to favor such effusion. Therefore the moderate emphysema, so far from *proving* injury of the lung, actually disproves it. But more than this; if one will thrust a bayonet two inches obliquely into a dead body in exactly the position of Banks's wound, avoiding perforation of the intercostal muscles, and open the orifice by the probe, for a few moments, as in examining a wound, although the parietes are not perforated at all, he will nevertheless find an emphysema in ten minutes, which will surprise him, if not posted in the matter, and convince him, until dissection has proved the contrary, that the chest is opened. *The emphysema will be found as great as that reported in Banks's case.* I go now further, and say, that it is by no means certain that Banks's chest was even perforated into its cavity by the bayonet. A careful examination, soon after the accident, and as thorough as the case warranted, did not prove any such thing. Dr. Knight could not penetrate the thorax, although the external wound was much larger than during life, "without using violence;" how, then, could one less expert than the veteran Knight succeed, and under much less favorable circumstances? Was violence used? Erichsen says that in such explorations with the probe, the utmost caution must be observed, lest the very condition be produced which is feared, viz., a perforating wound. Small as the internal wound was found in this case, might it not have appeared larger from ulceration, as evidently was true of the external orifice? Might not Banks have been compelled to stop at Meriden quite as much on account of the distress produced by the undigested load on his stomach, as the injury? Practical surgeons well know how a physical or mental shock, when the stomach is full, will often produce extreme agony until relief comes by vomiting. The Meriden gentlemen say that the stomach and bowels gave them the *most trouble*, and the patient *most pain*, for some days; much more than the wound. How, then, does it certainly appear that the bayonet and not the probe was the offending instrument? The trifling emphysema does not prove it, nor the hæmorrhage, nor the pain. The attending physicians were most certainly deceived as to the condition of lung and the immediate

cause of death, as the post-mortem conclusively showed; and may they not equally have been deceived as to the depth of the wound? This is highly probable, since they informed Dr. E. that they had passed a probe *two inches into the lung!* If so, why could not such a hole be found? If the bayonet made one, several inches deep, in that organ, the fact would have been very apparent. Who, then, punctured the thorax, remains an open and interesting question. It may be it was done by one of Colt's guard, or it may be it was somebody else; but whoever did it, no jury, on an investigation of the case, would have punished Wilson, the prisoner, for it, even had he been known to have made the thrust. However that may be, whether in this case the probe made the hole, or the bayonet; whether the thorax and lung were wounded, or the parietes alone, there is one universal and absolute rule, viz., where rapid effusion with or without pulmonary complication exists, if that collection by pressure interferes with vital functions, it must be removed; life will surely pay the forfeit of neglect.

The object of writing this article is to impress on medical men the necessity, in small perforating wounds of the chest, of examining carefully, by auscultation and percussion, at frequent intervals, since effusion may take place to a fatal extent in twenty-four or thirty-six hours. Guthrie says this is *the* great danger. Had the hole in Banks's side been made by an ounce bullet, the danger would not have been as great, in view of the omission, since effusion could hardly have occurred and not been discharged through so large an orifice. This effusion was plainly foretold in the case of Banks, and the danger urged upon the attendants from the very fact of the *smallness* of the wound. What makes the matter still worse, is, that the friends of the prisoner and the officers of the guard requested to be informed if Banks's symptoms grew worse, that they might add other advice in the matter, yet it was not done, though the medical attendants knew that not improbably the life of the prisoner depended on their management. Was this honorable? Or has it not rather proved to have been as unfortunate as unwise? No friend of the prisoner was permitted to know of the autopsy, or even the death of Banks, by any message from Meriden, though such information was especially desired, should the patient die. None but those with certain preconceived ideas were permitted to look within the body. Was it not feared that post-mortem appearances might overthrow ante-mortem opinions?

Having thus accomplished our object, viz., to press the great surgical fact upon the attention of the profession which is so faithfully and earnestly presented by Guthrie, we leave the subject, prepared, however, to enter more fully upon an analysis of this case, should circumstances render it necessary.

A MEMBER OF THE MASS. MEDICAL SOCIETY.

 THE BOSTON MEDICAL AND SURGICAL JOURNAL.

 BOSTON, OCTOBER 13, 1859.

IMPORTANCE OF DIAGNOSIS IN WOUNDS OF THE CHEST.—The case of wound of the thorax, which is reported in our present number, comes to us from an authentic source, and is of unusual interest, as showing the vital importance of a correct diagnosis in lesions of the chest. We have had no opportunity of reading the testimony on the other side, but if the facts are such as are given by our correspondent, the conclusions which he draws from them seem to us correct—so far as the cause of death is concerned. It is stated that on Wednesday Dr. CATLIN found, by auscultation, symptoms of disease of the lung. Unfortunately, we are not told what the physical signs were which gave rise to such an opinion. On the following day, Dr. ELLSWORTH found healthy respiratory murmur over the whole of the injured chest, and no difference of percussion between the two sides. The autopsy showed that there was effusion of air and fluid into the pleura, which must have come on subsequently to this examination, and which was anticipated by Dr. Ellsworth. Between Thursday and Sunday, therefore, there must have been signs of hydro-pneumo-thorax, and as these signs are usually unmistakable, it appears remarkable, with our present light upon the subject, that they should have been overlooked. We have no personal acquaintance with any of the parties concerned, have no partialities toward either, and only judge of the facts as represented by our correspondent. It is impossible to say whether puncturing the chest would have saved the life of the patient, but, as the case is now represented, it was obviously his only chance.

We are inclined to believe that the lung was wounded, because a considerable quantity of air was found in the chest; more than would be likely to be caused by so very oblique a wound through the thoracic parietes. Whether the air came from the lung or was introduced from without, it seems probable that the efforts of the patient in vomiting may have essentially contributed to its presence in the pleural cavity.

SUBCUTANEOUS INJECTIONS OF MEDICINES.—The injection of the salts of morphia, and other medicines, into the cellular tissue, in cases of neuralgia, seems to be all the rage at the present day; and from the enthusiasm with which this method is spoken of, both in the profession, and especially among the laity, there is danger that a reaction may occur, which will for a time cast into the shade a really valuable means of controlling this painful disease. There can be no question of its success in cases where all the ordinary internal treatment has been perseveringly and judiciously tried, but it not unfrequently fails, partly from being employed in cases for which it is not suitable, but sometimes without known cause. We are glad to see that the subject of subcutaneous injections of medicines in general, and especially of quinine in intermittent fever, will make the subject of a report before the American Medical Association, at the next annual meeting, in June, 1860, by Dr. IGNATIUS LANGER, of Davenport, Scott Co., Iowa, who invites the coöperation of the profession in the preparation of his paper. We can assure our readers that Dr. Langer is capable of doing justice to this important subject, and we hope that all who have had any experience with this mode of treatment will communicate the results to him.

ARMY AND NAVY DENTISTS.—We learn from the *American Journal of Dental Science* that the subject of the organization of a corps of army dental surgeons is in contemplation at Washington. Dr. MAYNARD has been for a long time urging upon government the importance of dental surgeons in the army and navy, and had so far impressed President Fillmore in favor of their appointment, that he brought it before the Cabinet in council. The Surgeon-General of the Army and the Secretary of the Navy are both in favor of this very sensible and humane suggestion.

SWALLOWING PINS AND NEEDLES.—At a meeting of the Buffalo Medical Association, Dr. STORCK reported the case of a girl, 12 years of age, who passed from the bowels nineteen pins and five needles in the course of four days, and who confessed that she had been in the habit of swallowing them for about three months, in order to get sick so that she might not be obliged to leave home and work out. One pin stuck in the throat, and gave some trouble, and the girl suffered occasional colicky pain, and had much swelling and tenderness of the abdomen, but there were no marked constitutional symptoms.

TRANSVERSE FRACTURE OF THE FEMUR.—We stated, in our last number, that a "transverse fracture of the shaft of the femur never occurs." We desire to correct that statement, having seen two specimens of this kind of fracture in the museum of the Massachusetts Medical College. We believe, however, that it is extremely rare.

AMERICAN MEDICAL ASSOCIATION.—We are requested to state that Dr. STEPHEN G. HUBBARD, of New Haven, has been appointed, by President Miller, *Junior Secretary* of the American Medical Association, *vice* Dr. ELI IVES, resigned. Dr. Ives was rather advanced for a *junior secretary*, though only 81 years old! Dr. N. B. Ives was doubtless intended, but the state of his health is such as to preclude him from accepting the office. There is every reason to anticipate a full meeting at New Haven. There will doubtless be a large delegation from Boston, and from this State generally.

MEDICAL SCHOOL OF MAINE. *Messrs. Editors.*—In violation of the unanimous feeling and sentiment of the medical profession of this State, on whose good will and favor the support and existence of the Medical School of Maine depends, the Trustees of the School have accepted the grant by the Legislature to this institution.

In view, therefore, of the obnoxious conditions contained in this grant, and the ill feeling engendered by its acceptance—your inquiry "how can a medical school refuse to admit a student because he has studied with this or that practitioner?" is, unquestionably, the starting point of a proper examination and correct understanding of the whole subject matter of the requirements of schools, the rights and privileges of students, and the relations of practitioners to both.

At present, I have neither time nor inclination to go further than to call your attention to the requirements of the following schools on this point.

At the Maine Medical School, the candidate "must have devoted three years to professional studies under the direction of a regular practitioner of medicine." At Dartmouth College, N. H., "the candidate must have studied medicine three full years with a regular practitioner." At the Massachusetts Medical College, Boston, the statutes require that "the student shall have studied three full years with a regular practitioner." At the College of Physicians and Surgeons, New York, the candidate must have "studied medicine three years, under the direction of a regular physician." At the University of Buffalo, N. Y., "satisfactory evidence must be presented of his having studied medicine, for three years, under the tuition of a respectable and regular practitioner."

Cumulative testimony is unnecessary in medicine as in law. We need go no farther, then, for the precise requirements of the schools. Our chief interest is with the meaning of the term *regular practitioner*, as identified and recognized by the *regular schools*. The Medical School of Maine is one of these—how, then, can it admit a candidate who has studied with an irregular practitioner? Will it do this in open, unmistakable violence to its own laws, because of the apparent advantages to be derived from the paltry grant of a few acres of land in the wilds of this State? Time will develop what Professors Peaslee, Sweetser, Lee, Conant, Chadwick and Tenney have to say on this matter, and their action upon it will determine the continued existence and prosperity, or the exhaustion, sinking and death of the School.

HUFELAND.

AMPUTATION AT THE HIP-JOINT.—This operation was successfully performed by Prof. Buchanan, at the State Hospital, on the 14th ult. The subject of it,

Master James Monroe Wilson, an intelligent and heroic little fellow of fourteen summers, is now out of danger, and has not swallowed a particle of medicine since the operation. The femur was nearly destroyed by necrosis, involving both trochanters, and the shaft had been eaten entirely through by ulceration, several days before the operation.—*Nashville Journal of Medicine and Surgery*.

REMEDY FOR THE BITE OF MAD DOGS.—A Saxon forester, named Gastell, now of the venerable age of 82, unwilling to take to the grave with him a secret of so much importance, has made public in the *Leipsic Journal* the means which he has used for fifty years, and wherewith he affirms he has rescued many human beings and cattle from the fearful death of hydrophobia. Take immediately warm vinegar or tepid water, wash the wound clean therewith, and then dry it: then pour upon the wound a few drops of hydrochloric acid, because mineral acids destroy the poison of the saliva.—*London Medical Circular*.

THE CHOLERA is said to be spreading along the shores of the Baltic. Its presence in Dantzic is officially acknowledged, as well as in Osnabruck and Elberfeld, and it is reported to have made considerable ravages in Hamburg.—*Ibid*.

APPOINTMENTS.—Dr. Robert Kells has been appointed Superintendent of the Mississippi State Lunatic Asylum at Jackson, in the room of Dr. W. B. Williamson, who resigned.—Dr. W. P. Williams, formerly of Maryland, has received the appointment of Quarantine Physician to the port of New Orleans.

Thirty or more cases of smallpox have recently occurred in Salem—all, it is said, traceable to one case, and that contracted while the individual was riding in the cars.—Dr. T. G. Morton, of Philadelphia, has been appointed one of the Attending Surgeons of the Wills Hospital in that city.—The death of Mrs. Klein, of New York, is reported as having taken place from the use of chloroform for the toothache. A few pennies worth was purchased at night, and in the morning she was found dead.—A spirited discussion on yellow fever and quarantine took place at the last meeting of the New York Academy of Medicine, on Wednesday evening, Oct. 5th.—Prof. Paul F. Eve, of Nashville, has just returned from an extensive tour in Europe. Many interesting letters from him have been published in the Nashville Medical Journal during his absence.

HEALTH OF THE CITY.—The mortality of the past week was exactly divided between the two sexes. As usual at this season, phthisis asserts its supremacy among the fatal diseases. We notice 7 deaths from cholera infantum, 5 from diarrhœa, 4 from old age, 2 from smallpox, 2 from typhoid fever, and 1 from dysentery. Nearly half the number of deaths were of subjects under 5 years of age, and there were 21 deaths of those between 20 and 40. Of the deaths from old age, one was of a male aged 88 years, and 3 were of females aged 81, 83 and 90 years. The whole number of deaths during the corresponding week of 1858 was 65, of which 17 were from consumption, 2 from cholera infantum, none from diarrhœa, none from smallpox, 2 from old age, and 6 from dysentery.

Communications Received.—On the Use of Potash in some Cutaneous Diseases.

Books and Pamphlets Received.—Physician's Hand-Book of Practice for 1860.—Introduction to Practical Pharmacy. By Edward Parrish.—Practical Treatise on the Diagnosis, Pathology and Treatment of Diseases of the Heart. By Austin Flint, M.D., &c. (From the Publishers.)

MARRIED.—In Philadelphia, Oct. 1st, Dr. Owen Wistar to Miss Sarah Butler.

DIED.—In Davenport, Iowa, Oliver H. Butler, M.D., 24.

Deaths in Boston for the week ending Saturday noon, October 8th, 86. Males, 43—Females, 43.—Apoplexy, 1—inflammation of the bowels, 2—ulceration of the bowels, 1—inflammation of the brain, 3—congestion of the brain, 1—disease of the brain, 1—burns, 1—cancer, 1—cholera infantum, 7—consumption, 18—convulsions, 1—cyanosis, 1—dysentery, 1—diarrhœa, 5—dropsy, 1—dropsy in the head, 2—drowned, 1—debility, 1—infantile diseases, 3—puerperal disease, 1—bilious fever, 1—scarlet fever, 1—typhoid fever, 2—gravel, 1—disease of the heart, 3—intemperance, 1—inflammation of the lungs, 1—disease of the liver, 1—marasmus, 2—old age, 4—palsy, 2—pericarditis, 1—disease of the spine, 1—scrofula, 1—smallpox, 2—ulceration of the throat, 1—teething, 3—thrush, 2—unknown, 2—whooping cough, 1.

Under 5 years, 41—between 5 and 20 years, 4—between 20 and 40 years, 21—between 40 and 60 years, 10—above 60 years, 10. Born in the United States, 62—Ireland, 21—other places, 3.